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## Original Department.

### Lectures on Experimental Physiology.

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(Reported for the Medical and Surgical Reporter.)

#### Lecture VI.—Pancreatic Digestion.

(*Continued from Vol.* XL, *page* 512).

Passing over the secretion of Brunner's glands, concerning the functions of which there is little known, we have to-day to study the secretion of the pancreas. The pancreatic fluid is poured into the small intestine immediately after the entrance of the bile, or in some instances simultaneously with it and the secretion of Brunner's glands. While the pancreas is one of the most constant of all the glands, existing in all mammals, in birds, reptiles, and in most fish and insects, its anatomical form is subject to great variation in different animals; it will be only necessary for our present purpose, however, to describe the arrangement in those animals which are ordinarily suitable for operation, for I need hardly tell you that here, as in the study of the other digestive fluids, we make use of fistulæ for the purpose of collecting this juice. In the dog, the animal almost invariably selected for this operation, the pancreas is found in the same situation as in mammals, birds and reptiles, viz., in the concavity of the constantly present curvature of the duodenum. In the dog, as in other mammals in which the duodenal mesentery is short or absent, this gland is compact, elongated and bi-lobed, one portion extending horizontally, toward the spleen, with the other portion descending at a right angle parallel to the duodenum. At the angle the pancreas is closely adherent to the duodenum, and even overlaps it, being connected by a multitude of small blood vessels, while the descending portion lies free in the abdominal cavity. There are in the dog, as in most mammals, two pancreatic ducts, the upper and smaller one opening into the duodenum in the same papilla as the biliary duct, while the larger and principal duct opens into the duodenum about two centimeters lower down. These ducts communicate by frequent anastomoses, but it is the lower one alone which is invariably selected in the operation. In those animals in which the duodenum has a wide mesentery, as in the rodents, the pancreas forms an arborescent mass between the two layers of the mesentery. This is the plan of arrangement in the rabbit, and also in the cat. In the rabbit the pancreas has two ducts, but the upper one, which enters the duodenum with the biliary duct, is very small, while the lower one is very long and enters the intestine about 30–40 centimeters below the pylorus, thus offering an arrangement suitable for operation. In the cat the arrangement of these ducts is so irregular as to baffle all description; in most cases there are many of them, and sometimes, as occurs quite constantly in the seal, the principal duct dilates into a sort of reservoir before entering the intestine.

Pancreatic fistulæ may be either temporary or permanent, but as the method of operating in each is not identical, I will describe them separately.

For the making of a temporary fistula, a large dog, preferably a sheep dog, is to be selected, as one which will offer the greatest probability of

escaping peritonitis, a result which would be disastrous to the success of the operation, since the pancreas is extremely susceptible to inflammation, and as a consequence the secretion becomes perverted and its properties cannot be rationally studied.

The operation is itself quite a difficult one, principally from the difficulty of finding the duct without injuring the gland or its numerous blood vessels, and requires a perfect acquaintance with the anatomy of this region and a considerable amount of operative skill. I would, therefore, advise any of you who wish to perform this operation to dissect the parts first on a dead animal. To be thoroughly successful the operation should be performed as rapidly as possible, so as to avoid exposing the parts any longer than necessary, while the pancreas itself should be handled with the greatest gentleness; and should be performed without an anæsthetic, so as to avoid subsequent vomiting and possible vitiation of the secretion.

The object of this course, however, is not only to demonstrate to you physiological facts, but also to teach you to operate for yourselves, so I will, therefore, perform this operation before you, on an anæsthetized animal, and so slowly as to permit each of you following every step of the operation, though the success of the operation, as regards the character of the secretion, will be probably thereby interfered with.

Two hours ago this dog received a hearty meal of bread and meat, and now that he is etherized and fastened on his left side, the belly being shaved, I will make an incision in the right hypochondrium, extending downward from the end of the last false rib, about five centimeters, and parallel with the linea alba, every bleeding point being tied before the abdomen is opened, and the peritoneum divided on a director.

Passing the index and middle finger of my left hand into the wound, the duodenum is easily recognized; the fingers are then carried well down into the right hypochondrium, to the right and then back of the convex surface of the arch of the duodenum, and then, keeping their palmar surface directed upward, the fingers are carried behind the duodenum and pancreas, which are then both to be drawn together out of the wound. The animal being in full digestion, the tissue of this organ is of a rosy pink coloration. By this manipulation the parts preserve their normal relation and the anterior surface of the pancreas presents in the wound. The next step, and perhaps the most difficult, is the finding of the duct, a proceeding rendered difficult, not only by the extreme shortness of the duct, but by its being surrounded by numerous blood vessels which bleed very easily, and which bridge over the furrow between the duodenum and overlapping edge of the pancreas. By keeping the anterior surface directed forward, this difficulty is reduced to a minimum, since here the duct is nearer the surface, and is only surrounded by a few small vessels, while on the posterior surface the vessels are very large, and it is just back of this lower large bundle of vessels that the duct enters the intestine. Now, on carefully pushing aside with a blunt hook the overlapping edge of the pancreas at the lower border of the angle formed by the transverse and vertical portions of this gland, and about two centimeters below the ductus choledochus, the larger pancreatic duct is seen, and may be distinguished from the blood vessels by its larger size and whiter color. I will now pass a thread around the duct, open it with a pair of fine scissors, and insert a small silver canula, about five mm. in diameter, and about ten cm. long, pushing it in up to the first division of the duct. I will now tie it securely in by the thread which I passed around the duct, and to make it still more firm I will pass a stitch through the serous coat of the intestinal wall, and fasten the canula there also.

The duodenum and pancreas are then returned to the abdominal cavity, retaining the ends of the thread and the free end of the canula in the wound, which is then closed by sutures, first sewing together the muscles and then the skin. Now, upon withdrawing the stylet from the canula, a few drops of a colorless, limpid fluid escape, which flow more rapidly when the animal makes any movement, and which is strongly alkaline. I will now fasten a rubber bulb, furnished with a stop cock, to the canula, to collect the juice. I will first compress the bulb, so as to empty it of air, and then, on closing the stop cock, the tendency of the bulb to expand draws the fluid out from the ducts. Generally the fluid is secreted quite rapidly and may be collected for several hours; after the first day, however, the character of the secretion alters, and is no longer normal and suitable for study. If it does not flow rapidly it may be stimulated by injecting ether through a tube into the stomach; vomiting stops the secretion. Usually after the second day the tube and threads drop out, or else they may be gently removed, and the wound generally heals readily, and as the duct becomes restored, the same animal may again be used for the same purpose.

One difficulty we have to contend with in this operation is, that since the duct is so short the canula is very apt to slip out; this may be partially remedied by having a canula made with a little bulb on the end to be inserted, or a T-shaped canula may be used, the duodenal end of which must, of course, be closed. If such a canula is used, it is better to have one made in two sections, one being first inserted in the duct and the other, which is to come out of the wound, screwed in afterward.

The method of operation which you have just seen me employ is essentially that first devised by Bernard, and he always held that permanent pancreatic fistulæ were unreliable. By a somewhat different method of operating, however, Ludwig and Bernstein have succeeded in establishing permanent pancreatic fistulæ, which yield a comparatively normal secretion, though even here it differs somewhat from the fluid obtained by temporary fistulæ. I have here a dog in which ten days ago I established a permanent fistula after Ludwig and Bernstein's method. I selected a small dog for this operation, as in them the pancreas is nearer the middle line than in large dogs, and hence the parts are not as much disturbed by the fistula. The dog having been kept fasting for twenty-four hours, so that the pancreatic vessels should contain as little blood as possible, after narcotizing him by a subcutaneous injection of morphia, I opened the abdomen by an incision about two centimeters long, made in the linea alba and midway between the xiphoid cartilage and the umbilicus. The duodenum and pancreas were then drawn out of the wound, and the pancreatic duct isolated and opened by a little cut in one side. Instead, then, of inserting a canula, two pieces of lead wire, bent at a right angle, were introduced, one wire being passed toward the gland, and the other into the intestines; the remaining halves of each wire were then twisted together so as to form a T-shaped piece, the middle limb of which projects through the wound. Owing to this shape of the wires they cannot fall out and cannot move around in the duct, and since wire was selected which would not fill up the calibre of the duct, the flow of the secretion into the intestine is not interfered with. After the insertion of the wire I passed three stitches through the wall of the intestine near the duct, and then returned the duodenum and gland to the abdominal cavity, taking care to keep the ends of the wires and threads in the wound. The threads were then used as sutures to close the wound, and at the same time to keep the duodenum in apposition with the abdominal walls. The next day, when inflammatory adhesion had probably taken place, the stitches were taken out, but the wire left in, and in three or four days more the juice was collected and examined. You see that the wound has now almost entirely healed, with the exception of a little fistulous tract at the sides of the twisted wires, from which the juice is exuding. The fistula might be preserved even after removal of the wires, but would require the daily passage of a fine elastic probe.

I will now collect some pancreatic fluid from this fistula. I have here a wooden support, consisting of four upright bars, joined at the top by transverse pieces from which a horizontal bar is suspended by a cord and pulleys. I will fasten the dog to this horizontal bar by two straps, which pass under his belly, and then raise the horizontal support until the dog can barely touch the table with his toes. Thus suspended, he remains perfectly motionless, and by fastening a small funnel over the fistula, the juice may be collected in a glass below.

We are now prepared to examine the physical properties and composition of the pancreatic juice, and for that purpose I will make use of a fluid which I have been collecting for the last few hours from a recent temporary fistula. Three hours and a half ago I made a temporary pancreatic fistula on a large dog, which was in full digestion, and without employing any anæsthetic. The operation from first to last only occupied seven minutes, and nothing occurred which could interfere with the normal character of the secretion. I will now open the stop cock, and on compressing the bulb I am able to collect 20 cc. of fluid. It is a clear, colorless, viscid liquid, of a strongly alkaline reaction; morphologically it contains few or no structural elements, though corpuscles similar to those found in saliva have been claimed by Kühne to exist, and occasionally free particles of oil. Chemically its composition is complex, and not yet thoroughly established; it differs from the other digestive fluids in containing an exceptionally large amount of proteid, varying, however, with the rate of secretion, the increase of solids not bearing a proportionate increase to that of the fluid elements. The amount of solids also varies in the fluid obtained from temporary and permanent fistulæ, in the former being from 8–10 per cent. (Bernard), and in the latter 2–5 per cent. (Bernstein). Fresh normal pancreatic juice contains albumen, alkali-albuminate (casein), a small amount of fats and soaps, a large amount of sodium carbonate, to which the alkaline reaction is due, and pancre-

atine, which is probably capable of resolution into three ferments. Pancreatic juice is also stated to contain peptones, leucin and tyrosin, but it seems probable that these elements are not found in perfectly fresh juice, with the exception, may be, of a trace of leucin, but are formed through the digestion of the albumen in the pancreatic juice by one of its own ferments. I can show you the presence of some of these elements; the limited quantity of juice, however, will necessitate my employing very small quantities. On surrounding a small quantity with a freezing mixture, and cooling it down to 0° C., the fresh juice becomes gelatinous, again becoming fluid when warmed, and when exposed to a higher temperature it becomes entirely solid, like the coagulated white of an egg. A similar effect is produced upon the addition of the mineral acids, alcohol and an excess of magnesium sulphate, an effect not capable of production with ordinary albumen. The coagulum produced by alcohol is capable of resolution in water, and the coagulum of heat and acids is soluble in alkalies. When the coagulum of the albumen produced by heating fresh juice up to 72° C. is allowed to separate, the alkali-albuminate may be precipitated by acetic acid. The juice from the permanent fistula is more fluid, less coagulable by heat, contains a less amount of solids, and does not gelatinize in cooling.

While studying gastric digestion we saw that all its phenomena could be most conveniently studied with an artificial fluid; the same conditions prevail in the study of the subject now under our consideration.

Artificial pancreatic juice can be made by three different processes, and I here show you examples of each.

This specimen was obtained by mincing the fresh pancreas of a dog killed in full digestion, washing it to remove the blood, and then infusing it for two hours in four times its weight of water warmed to 25° C., taking care to keep the mixture at that temperature during the whole time of infusion. It was then filtered first through muslin and then paper, and since the filtrate was acid, from the development of fatty acids through the action of the ferments on the fats of the pancreas, it was neutralized with sodium carbonate. The filtrate is, as you see, slightly opalescent, from the presence of a small amount of fat in the form of an emulsion. This preparation has all the properties of pancreatic juice; the degree of its digestive action for proteids, however, will be dependent upon the nutritive state of the pancreas from which it was made. It contains all the elements of pancreatic juice. I will boil a portion, and there is quite a dense precipitate of albumen, and in filtering off this coagulum and neutralizing the filtrate with acetic acid, there is a deposit of alkali-albuminate. It also contains leucine and tyrosine.

This second specimen of artificial juice was made by first laying a minced pancreas, for two days, in absolute alcohol, which was then expressed off, and a glycerine pancreatic extract made in the usual manner and filtered. This preparation contains a considerable amount of the amylolytic ferment, but the quantity of the proteolytic ferment, as in the first, depends upon the condition of the gland.

The third preparation was made by mincing a fresh pancreas and rubbing it up in a mortar with powdered glass. For each gram of gland substance 1 cc. of 1 per cent. acetic acid was then added, and mixed thoroughly in the mortar for ten minutes, and then ten times its volume of glycerine was added, and the whole allowed to stand for three days. This preparation contains a much larger proportion of the proteolytic ferment than was obtained in either of the other processes, since the acetic acid has converted into ferment the zymogen or substance yielding the proteolytic ferment.

With these artificial fluids let us now examine the process and results of pancreatic digestion.

The most prominent and well-known fact in this connection is the power which the pancreatic juice possesses of forming a remarkably stable emulsion with fats. I will shake up two parts of the aqueous infusion with one part of olive oil, and a thick creamy emulsion is formed, which will stand for a long time; or upon adding two parts of the same infusion to one part of fresh lard melted over a water bath, and rubbing them gently together, we obtain an emulsion which will be permanent, even in the cold.

This emulsifying property is due to the alkali-albuminate of the pancreatic juice, for upon adding liquor potassæ to the first mixture, so as to dissolve the albumen, the particles of oil are set free and again run together. For the same reason the glycerine extracts will not form an emulsion with oil, on account of the absence of alkali-albuminate.

In addition to its emulsifying power over fats, pancreatic juice rapidly converts starch into glucose. I have here two test tubes, one containing starch mucilage, the other raw starch paste. To each I will add equal quantities of the aqueous pancreatic infusion, and after placing them for a minute or two in the water bath at 40° C.,

Fehling's test shows in both the presence of a large amount of sugar. We see here at once a difference between the saccharifying power of saliva and pancreatic juice; the former did not act, or, at least, for a very long time, on raw starch. This difference of action is only one of degree, however, and not of kind; both change starch into sugar through the presence of a ferment, and in both instances this ferment is destroyed by boiling; in fact, all that I told you in reference to this property, as instanced in the case of the saliva, might be repeated here, with the one modification as to the very much stronger amylolytic power possessed by the pancreas. In the case of the pancreas, at least, this saccharifying property is due to the presence of a ferment which is formed in the gland tissue by the transformation of some previously existing material, since it has been found that if the ferment is completely extracted from a fresh gland by glycerine, and the inactive residue be allowed to remain on the filter for five or six hours, exposed to the air, a further production of ferment occurs, and this new formation may be again extracted by water or glycerine. That this result is really due to a new formation of ferment, and not to the occurrence of decomposition, is proved by the fact that if the watery extract of a pancreas is once deprived of its action on starch by boiling, this power never returns in any stage of the subsequent decomposition.

We saw in our study of gastric digestion that the reaction of pepsine with fibrine and a dilute acid might serve as a means of recognizing the locality of gastric digestion in the lower animals, and Bernard has shown that the pancreas may always be recognized by its power of decomposing fats and forming fatty acids and glycerine. The entire process as proposed by Bernard is too lengthy to permit of my showing you all the necessary manipulations. I can, however, show you the fundamental facts, but for details will have to refer you to Bernard's original memoir. In the first place, you remember I showed you that the aqueous pancreatic infusion contains more or less fat, and if kept for a few hours at 40° C., without any addition, a strong acid reaction is developed from decomposition of the fat. I have here a specimen of pancreatic infusion, which about two hours ago I neutralized with sodium carbonate, and then added to it a little neutral olive oil, and then placed the tube in the bath at 40° C. I will now draw up with a pipette a little of this mixture from the bottom of the tube, and on placing it on a piece of blue litmus, a decided red is developed.

We have now to consider the digestion of proteids by the pancreatic juice, the most complex as well as the most important of its properties. This action is similar to that of gastric juice in so far as they both are due to the presence of a ferment which is destroyed by heat, and that they both convert proteids into peptones; there are, however, many points of contrast.

In the first place, we saw that gastric digestion required the presence of a dilute acid; in pancreatic digestion we will find that a 1 per cent. solution of sodium carbonate is as essential as was the .2 per cent. HCl. in gastric digestion.

I have here a test tube in which I have been digesting for two hours, at 40° C., several fragments of thoroughly boiled fibrine in an artificial pancreatic juice, made by adding a few drops of the glycerine-acetic acid extract to a 1 per cent. solution of sodium carbonate, and you see again a marked contrast between this result and what occurred under similar circumstances with gastric juice. At first sight it would appear that the fibrine was entirely unaltered, but on stirring it with a glass rod it is easily torn, and many of the smaller fragments dissolve, and on removing some of the larger pieces, and washing them with water, they are seen to be corroded and as opaque as before, and not swollen and transparent, as would occur in an analogous stage of gastric digestion. Besides these superficial changes, however, the attributes of the fibrine have been very considerably modified. You remember that this fibrine was boiled, and that boiled fibrine is not soluble in dilute acid. I will place a few fragments of this boiled fibrine in a .2 per cent. solution of hydrochloric acid, and it very rapidly dissolves, forming a solution of syntonin, which I can precipitate upon neutralization. Here is, then, one of the distinctive features of pancreatic digestion. Before being dissolved, boiled fibrine is rendered more soluble in dilute acids than even raw fibrine, which you know will not dissolve for many hours.

There is another remarkable fact about this stage of the pancreatic digestion of boiled fibrine: the fibrine becomes soluble in a 10 per cent. solution of sodium chloride. I will rub up another fragment with a 10 per cent. salt solution in a mortar, and when it dissolves filter. Now, to one portion of this filtrate I will add nitric acid, and another I will boil; in both there is a precipitate.

Having thus seen that the first step in the pancreatic digestion of boiled fibrine is to change it to a soluble albuminous substance somewhat resembling raw fibrine, let us now examine the subsequent stage in the process. I will boil a

portion of this artificial juice in which the fibrine has been dissolved, and there is a precipitate formed. I will neutralize another portion with acetic acid, and I again obtain a deposit. This is again a difference from gastric digestion, for although the alkali-albuminate precipitated upon neutralization is analogous to the parapeptone, the albumen coagulable by heat is entirely unrepresented in any known product of gastric digestion.

To examine the further stage of this digestion I will make use of another specimen of pancreatic juice entirely similar to the first, with the one exception, that the fibrine was subjected for five hours to the action of the juice instead of two. I first neutralized it with acetic acid, and then boiled and filtered it, to remove whatever albumen still remained undigested. It was then evaporated at 65° C., to about one-third its bulk, and an excess of absolute alcohol was added while still hot, and after standing for twenty-four hours the precipitate which had formed was collected on a filter. Now, on dissolving this precipitate in water and applying the usual tests, we recognize the presence of peptones entirely similar to those produced in gastric digestion, with the doubtful exception as to their being precipitable by acid. The amount of peptones, however, obtained in this instance, falls far short of the amount of fibrine which had been digested, and the longer the pancreatic digestion is continued, the greater this apparent loss. This loss, however, appears to be counterbalanced by the appearance of two crystalline principles, leucin and tyrosin, which apparently result from the breaking up of the proteid substance which may be undergoing digestion.

After filtering off the peptones, I evaporated the alcoholic filtrate to a small bulk, and allowing it to cool, I obtained these crystals of tyrosin, in white acicular tufts, and on pouring off the mother liquor leucin crystallizes out in white shining scales. The mother liquor also contains naphthilamine and indol, bodies formed in the last stages of pancreatic digestion.

The presence of naphthilamine is shown by adding gradually to the mother liquor, diluted with water, a little chlorine water, when a rose-red color is developed. Indol, to which apparently the peculiar odor of fæces is due, is recognized by its forming a red color with dilute nitrous acid. As a very dilute acid is required for this reaction, it is most conveniently obtained by boiling a little glucose in a test tube with nitric acid, and when the tube is filled with red fumes, pouring out the acid and filling the tube with water. On now boiling this solution with a little dilute mother liquor, the characteristic red is developed. There is some doubt, however, as to whether indol is properly a result of pancreatic digestion, or is due to decomposition, as it has been claimed that when pancreatic digestion is carried on in the presence of salicylic acid no indol is formed.

Attempting now to explain the phenomena of pancreatic digestion, we must adopt, with Kühne, the view that native albumen or fibrine can be split up into two elements, which he terms respectively an anti-residue and a hemi-residue. When subjected to either peptic or tryptic (the proteolytic ferment of the pancreas) digestion, albumen, or other proteid, is split up into an anti-peptone and a hemi-peptone, the former being incapable of further digestion by either ferment, while the latter is capable of the further resolution under the action of trypsin into leucin, tyrosin, etc. In both instances, before the stage of peptone is reached, there is an introductory stage corresponding to the formation of syntonin, which, however, is termed respectively hemi and anti-albumose. The anti-albumose is apparently identical with syntonin, and is convertible only into anti-peptone, while hemi-albumose seems more closely to coincide with Meissner's a-peptone, and resembles myosin in that it is soluble in a 10 per cent. sodium chloride solution. Hemi-albumose is convertible into hemi-peptone, and under the action of trypsin, into leucin, tyrosin, etc.

Applying these views to the decomposition of proteids by acids, dilute hydrochloric acid at 40° C., gives rise, on the side of the hemi group, to hemi-albumose, and so to hemi-peptone, and by the action of sulphuric acid at 100° C., the hemi-peptone is further reduced to leucin and tyrosin. On the side of the anti group these agents, as well as an imperfectly acting ferment, give rise to what Kühne terms anti-albumate, which is evidently the parapeptone of Meissner, and is incapable of any further change under the action of pepsin, but under trypsin becomes anti-peptone (Foster).

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—Official reports, made under a law which came into force in May, indicate that the adulteration of articles of food and drink is carried on to an alarming extent in Germany. In Berlin, 700 specimens of sausages were examined, and all were found to be bad. Chocolate, wine, milk, beer, brandy and soda water, in more than half the cases examined, were found impure and adulterated.

## COMMUNICATIONS.

### CLINICAL STUDIES OF INEBRIETY—SOME OBSCURE SYMPTOMS.

BY T. D. CROTHERS, M.D.,
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The early symptomatology of inebriety has never been studied. Patients are rarely ever seen by physicians until they become chronic, and then only for temporary relief of some acute stage or condition.

They seldom go to an inebriate asylum until every other means has been tried and failed, and the clinical study of such cases is always difficult, requiring time and patience. Of the early history of such cases the patient's memory is often very clear, and more reliable than at later periods, and to those accustomed to study these cases, having once determined some prominent early symptom, the others can be readily traced. Although we are not able in our present knowledge to follow out all the stages of these cases from day to day, yet the marked similarity of the principal symptoms is conclusive evidence that we are dealing with a disease which follows a regular course, governed by causes and conditions which will be understood with a larger knowledge of the subject.

All our clinical studies fail to support the theories of vice and disease, and distinctions of responsibilities, etc., which are so confidently put forth by many who assume to know, without special study of individual cases.

In some previous articles on this subject in the REPORTER we have stated that inebriety was always preceded by certain conditions and symptoms which might be recognized by practical observers.

We now propose to group some of the most significant of these early symptoms, and indicate their pathological bearing, with a view to direct the attention of physicians to further studies in this direction.

These cases are selected because of the comparative accuracy of the early history, as noted by friends and the patients themselves.

**Case 1.—Inebriety Preceded by Delusions of Food and Drink, and General Eccentricity.**

O. B. had a drunken grandfather on his mother's side. Both parents were strong, healthy people. His mother was a very pious, conscientious woman, and died of some affection of the heart, at 45 years of age. His father died at 56, of pneumonia. All his brothers and sisters were healthy. After graduating from college, when 21 years of age, he became deeply religious, and commenced to keep a minute diary of his thoughts and feelings. From this record we are able to draw many of the following facts:—

At this time he was healthy and perfectly temperate in all his habits, and a man of good average ability, with much general culture.

After completing his theological course, he was installed over a large village congregation. About this time appeared what I shall term dietetic delusions. He considered that solid foods were injurious, and began to live almost altogether on soups and milk. A year later he changed this for a diet of solids, using all kinds of food, except meats, and drinking freely of water at all times.

He then conceived the idea that the care of the body was the highest religious duty of man, and both acted and preached this doctrine. He would change his dress several times a day, to suit the changing temperature, and gave the greatest attention to all that he ate and drank.

St. Paul's ideal of "keeping his body under and bringing it into subjection" seemed to be the ambition of his life. He expressed great fear that the animal part of his body would gain the ascendancy, and thus avoided all conversations and readings of crime and disaster. All his leisure was spent in exercising, bathing and contemplations of spiritual themes. During this time he preached against intemperance and the abuse of the body, with much vigor and earnestness. Then he became interested in the physiology of food, and planned out an elaborate system of diet and weighing of foods, which was used every day. His diary during this time is a curious medley of reflections on this subject and plans to build up the body and develop the spiritual condition.

In the meantime he married and became a professor in a college; all his delusions continued, although changing in both the object and system to be pursued. He was evidently at this time neuræsthenic, and complained of nervousness and exhaustion; also was easily agitated and extremely sensitive to the changes of weather. Had a great dread of society and excitement, and was treated by a physician for anæmia and muscular rheumatism.

He imagined that he was suffering from Bright's disease of the kidneys, and increased his care of both food and drink. In appearance he was the picture of health, and mentally was quite active, writing and teaching with all his usual vigor.

His wife died suddenly, and the loss seemed to

rouse him to greater exertions and efforts to care for himself. He published a book on food and drink, full of extreme views, for the purpose of proving that the origin of all disease and vice came from the quality and quantity of food.

After a six months' tour in Europe he returned a wine drinker, with all his old notions exploded. At first he drank secretly, then openly, giving no reason for this change. He complained of dyspepsia and heart disease, and resigned his professorship. A few months later he accepted a situation as a clerk, and from this time went steadily down to a confirmed inebriate; using brandy nearly every day, to intoxication. Muscular tremblings and anaemia, with general congestion, were present. The only delusion present was fear of sudden death from spontaneous combustion. His religious habits were kept up, but the care of his body and the food were neglected.

He continued to write, in a sad, dreary way, of the conflicts of the animal part of his nature, but made no efforts to recover. He was reckless and untruthful, boasting of things which did not exist, and using violent language when opposed. He expressed a desire to recover but made no exertions to accomplish it. His memory was obscure, and at times he seemed to have periods of extravagant hopes and expectations. Six months' residence in an asylum was followed by a general improvement of both body and mind, and he was discharged, and is to-day temperate and occupying a responsible position. Within a few months the reappearance of all the old dietetic delusions has given his friends just cause for alarm, and without doubt they will lead back to inebriety sooner or later.

The prominent symptom here was morbid fears or dietetic delusions about food and drink. Although a cultured, sensible man, he never realized their morbid, diseased character. While in Europe the use of wine acted as a spark exploding these impulses and developing the very animalism he sought to check. It is possible he may have realized unconsciously the danger which he inherited, and sought to avert it by such means; or this strange development of symptoms, along with a religious change, may have been a symptom of inebriety in the future.

**Case 2.—Inebriety Preceded by Religious and Dietetic Delusions.**

M. was a farmer, whose parents were both consumptive. His father and two of his uncles drank hard, and one of his brothers was eccentric and became insane. His parents died when he was 13 years old, and he went to live in the family of a very pious uncle. Here his religious character was developed to a high degree. An ambition to be a missionary like St. Paul filled his mind, only he trusted to faith alone and the call of the Spirit, without the addition of works, thinking that all the means would be at his command when the time came. For several years he worked on the farm with his uncle, confidently expecting some revelation and direct call, with a miraculous gathering of the means.

His sisters, who married and lived near, had fears of his mental condition, and hence watched him carefully. At twenty-two he became an energetic temperance man, lectured and held meetings about the town he lived in. He conceived the idea that all drunkenness came from the use of animal food, and began to study the effects of foods on his body. He changed his religious views, and considered that the care of the body was the sole object of life, and talked incessantly about the laws of nature and their abuse. He used only vegetable food, and that very sparingly. Believing that he had spermatorrhœa, he went to a "Quack Water Cure," and after two months came back more eccentric in all his habits and conceits of food and drink. From this time he worked as usual on the farm for five years, when his uncle died and he came into possession of the farm. He married, and a few years later he began to drink cider freely, urging as a reason that his system needed an acid. Some months after he came home from a temperance meeting intoxicated, and although he was more enthusiastic than ever in all his delusions of food and drink, he drank at times, and was intoxicated, without any excuse, except, according to his views, the indigestion from some kind of food which he had not understood. As an instance of these delusions, he attributed to the meat dressing on food, and the mode of preparation, and to the animalcula in water, the cause of his desire for drink. His mind seemed to grow more feeble, and his whims manifest themselves in business and all intercourse with his neighbors. He was seized with typhoid fever, and after recovery drank hard from day to day. Signing the pledge and promising his friends that he would not drink again, and yet going deliberately away without any thought of what he was doing. He seemed to lose all consciousness of right and wrong, and forgot that he had promised or wanted to abstain. His body and mind became so much impaired that he was at last sent to an insane asylum, where, after three months' residence, he recovered in part and returned. The old delusions of being a missionary, and of miraculous means open to

enable him to accomplish this end, has come on again. He is a very temperate, conscientious man, and is an eccentric reformer in the temperance ranks. In the asylum he was stolid and forgetful, full of delusions himself, although he reasoned well about matters outside, and was on all other subjects free from any noticeable peculiarities. He was alarmed lest his wife would desert him, and thought his stay in the asylum had a sinister motive; supposed his property would be taken from him. He eat heartily at times of all kinds of food, then abstained, and all the aches and pains he attributed to the presence of bad food.

This case was particularly noticeable for the delusions of faith and of food. In all probability the spermatorrhœa was largely nervous, and the treatment and residence with the *Water Cure* only served to rouse and intensify the nervous trouble. His enthusiasm in the temperance cause was of the same character, only varied as to object, and destined to break out into inebriety sooner or later, under any circumstances.

**Case 3.—Inebriety Preceded by Delusions of the Care of the Body, Fear of Death, and Temperance Enthusiasm, etc.**

B. Both parents died of consumption when he was six years old. He was brought up on a farm, and was a strong, temperate, retiring young man, free from all peculiarities or noticeable weakness. When twenty-four he was employed as express messenger on the railroad. Three years later he married, and his wife noted the following curious habits, but in reality symptoms. He drank milk in preference to tea and coffee, which he supposed to be adulterated, and had great fear of being poisoned by water. He lived on a diet of rice, potatoes and apples, and was constantly studying the food which he thought would prevent disease. He talked confidently of the theory that each person required certain kinds of food to prolong life and avoid disease, and the study of these foods was the great purpose of life. He read largely of the popular scientific literature of the day, and adopted many curious notions and opinions. He was in good health, and in no other respect was he peculiar or strange. These fancies and whims grew more prominent each year. At one time he lived on a vegetable diet, and wrote out minutely every day a description of his feelings and condition; then he changed to a meat diet almost exclusively.

He gave great attention to the care of his body, regulating all his habits with mathematical precision, reading much, and exhibiting a passion for histories of the Rebellion, and spending hours in calculations of the greater endurance of the armies if the proper diet had been used. He attended closely to his business, was *particular* and *fussy*. Could not bear to do anything out of time, and was very sensitive about little interruptions. All these peculiarities grew steadily upon him, making themselves prominent to those in his company. His health was good and his temperance enthusiasm increased, until he became a lecturer, seeking every opportunity to speak to and exhort audiences of young men. He joined all the temperance societies, and was very active. About this time he manifested great fear of death and loss of property, and seemed to have delusions of caution; he bought tickets in Travelers' insurance companies every day; giving particular caution to the inmates of his house about fire, changing his will frequently, and making a special statement in his diary of what he wished to have done. Later, he gave up the express business and went to farming, manifesting the same caution and changeableness of purpose and plans; he had an attack of remittent fever, which increased his delusions of disease and turned his attention to remedies and means for recovery. Anæmia, neuralgia, with a general condition of neuræsthenia came on. He began to use all kinds of quack medicines, and at last found relief in some bitters which contained large quantities of alcohol, which he drank regularly from day to day. From this time he went rapidly down, drinking to intoxication, neglecting his business and losing his property, and becoming an aimless, chronic drunkard. His friends finally sent him to an asylum; he was full of delusions of persecution, was passionate and very childish in thoughts and impulses. After six months' residence and treatment he recovered and was discharged, and moved to the far west. His mind regained to a large extent its control, and the old delusions had passed away.

These three cases bring out prominently the peculiar class of symptoms which I am confident both precede and follow many cases of inebriety. Neuræsthenia, with both functional and organic nerve disturbances, is present in nearly all the cases. They all follow in the line of many of the complex physical symptoms which are so puzzling to the ordinary observer, and indicate, without doubt, the disorder of some brain centres or some general condition of debility.

The presence of these early symptoms is not always followed by inebriety, but they indicate a condition that lies closely along the "border

land" of this disorder. A condition which, with a slight change of circumstances, develops inebriety at once; all the soil is ready, only needing the germ to spring into activity.

These cases can be studied in nearly every community, and are seen often in the enthusiastic temperance men, who have a half consciousness of their danger, and hence are more active to help others, and by this means save themselves. These symptoms are of grave importance when developed among brain workers, because, all things considered, less power of resistance and capacity for recovery exists.

Delusions and morbid convictions and introspections of the mind impress the brain more permanently in some cases than in others, and their presence in any case is a hint of much pathological importance.

These clinical facts may be condensed into the following statements:—

1. Extreme solicitude for the care and protection of the body, as well as the food and fluids used, when it becomes a delusion, absorbing the thoughts and energies, is, as a rule, an early symptom of inebriety.

2. Delusions of fear, faith, and extreme anxiety for the temperance reform, in persons not intemperate before, accompanied with changing emotions and unstable nerve conditions, are significant symptoms, very often ending in inebriety.

## Hospital Reports.

### HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

**SERVICE OF PROF. LOUIS A. DUHRING, M.D.**

**Reported for the Medical and Surgical Reporter.**

#### Erythema Nodosum.

The patient was a little girl, five years of age, whose legs, thighs and arms were the seat of a number of flat nodules, from half an inch to an inch in diameter, slightly elevated above the level of the surrounding skin, having a smooth surface without scales, and a dark reddish or purplish color. There was no sensation of itching, nor of burning, but the child said that the lesions were painful. There was no eruption of any sort on other parts of the body. The affection had made its appearance about a week previously, showing itself originally upon the legs, the lesions being at first of a more vividly red color, but within a day or two becoming quite dark or livid. They came out one or two at a time, new ones appearing every day, and within a few days the thighs and also the arms became involved. At the time of her appearance in the clinic the disease appeared to be at its height. The patient's general health had not been very good, especially of late; her appetite was capricious; her bowels were constipated; she was subject to headache.

Dr. Duhring said that the history of the affection was quite characteristic. Erythema nodosum was an uncommon affection in this clinic. When cases came under observation, it was usually in the later stages of the disease. The lesions look very much like bruises; a slight circumscribed tumefaction of the skin occurs, which is first of a bright red color, but this soon grows darker, purplish, livid, and finally runs through the various shades of blue and yellow which mark the changes taking place in a bruise. This resemblance to a bruise has given rise to the name *dermatitis contusiformis*, formerly applied to the affection, a name which is now quite obsolete. It shows, however, how the appearances presented by this affection impressed those who first saw it. Many colored plates representing erythema nodosum represent the lesions as much more prominent than in the present instance; the wax models in the University Museum show protuberances nearly the size of a half walnut. The present size, the lecturer said, was more usual. This affection, Dr. Duhring continued, was in reality a phase of *erythema multiforme*, of which another variety, erythema papulatum, was that at times observed on the backs of the hands. The treatment of erythema nodosum should be as simple as possible; often no treatment is demanded. Saline drinks may at times prove beneficial. In order to allay the mother's fears, general directions and advice should be given. Rest should be enjoined. Locally, if there is pain, cold compresses or a roller bandage may be employed. The affection ordinarily runs its course in a fortnight, and gets well spontaneously. The diagnosis is important. In the present instance it was easy, but in cases where only a single lesion shows itself at a time it is sometimes difficult to distinguish its exact character, and it might easily be confounded with threatening abscess or with erysipelas.

#### Urticaria.

A laboring man, about 30 years of age, presented himself without any distinct lesions, but showing numerous scratch marks upon different parts of the body. He had been troubled, he said, for several weeks, with "hives."

Almost every one, Dr. Duhring said, knows the lesions of urticaria, for they are striking, and the disease also is common and well known among all classes. But the lesions are fugitive, and it is often difficult to get an opportunity to inspect them. The patient states he has had "hives," but at present none of the characteristic wheals of urticaria are to be seen; we see, however, scratch marks scattered over various parts of the surface. Now scratch marks and excinations are not in themselves characteristic; they may be present as the only conspicuous lesions in phtheiriasis as well as in urticaria. We must take this into consideration, for phtheiriasis may occur in all walks of life, and in a case of eruption like the one before us we must not hesitate to examine our patient for pediculi, no matter how high his social position. Here we find the clothing quite free from lice or nits. If we come back to the scratch marks again and examine these, we see that they are not so numerous as they would

be if the disease were phtheiriasis. Lice multiply very rapidly, and if they had been present here for six weeks, which our patient tells us has been the duration of his disorder, the ravages which they would have committed by this time would have been much more marked in their effects. Let us now attempt to develop some wheals artificially. (Dr. Duhring here drew the edge of his finger several times across the surface of the skin, over the back, so as to produce a gridiron arrangement of lines.) This man's skin, you note, is in a very sensitive condition; you observe that already there are white raised wheals beginning to form, arranged in cross lines just where my finger has been drawn. This indicates positively the nature of the disease. We have here urticaria, and the condition, whatever it may be, which has given rise to this susceptibility of the skin is still in operation.

Urticaria may be either acute or chronic, that is, it may consist of an attack lasting some hours or days, or it may recur indefinitely and last weeks, months or years. The acute variety is most frequently brought about by the ingestion of certain kinds of food, strawberries, shell fish, etc. The chronic variety is usually dependent upon some, it may be obscure, functional disorder of the nervous, or digestive, or, in women, of the generative system. While the external treatment in urticaria is the same, whatever the variety or the cause, the internal treatment differs. On questioning our patient, we find he shows positive signs of indigestion. We shall therefore direct that he take a sufficient quantity of Rochelle salts, morning and evening, to produce several copious evacuations in the twenty-four hours. He shall also be ordered four grains of quinine, to be taken three times a day. In addition, the patient's diet must be regulated. He must avoid pastry in every form; pickles, salt meat, cheese and crude vegetables, must also to be eschewed. In ordering local treatment for a case like the present we should prefer lotions, as they are more apt to give quick relief to the intense burning and itching. The following is a useful formula:—

℞. Acid carbolic, f. ʒ j ad iij
Glycerinæ f. ʒ ij
Aquæ ad Oj. M.

Another one which is equally good and useful, is this:—

℞. Alcoholis f. ʒ ij ad vj
Glycerinæ f. ʒ ij
Aquæ Oj. M.

Sometimes one of these lotions is the better, sometimes the other. They are both very convenient and useful. Alcohol, brandy, whisky or other liquor, pure, may also be used.

**Cornu Cutaneum.**

Jane McC., seventy years of age, presented herself for the relief of a horny growth situated on the left cheek, over the malar eminence. This was about an eighth of an inch in diameter, and about half an inch in length, rising abruptly from the skin and standing out at a right angle from the surface. It had first been observed about ten months previously, as a minute, hard scale upon the surface, which itched slightly, and when picked off rapidly grew again, and had increased steadily, although very slowly, in size, up to the time of the patient's presentation before the class. On the vertex of the scalp could also be observed a sebaceous cyst or wen, the size of half a walnut, quite without sensation, and of many years' duration.

Dr. Duhring called attention to the characteristic features presented by this cutaneous horn, which, though small, was quite typical in its appearance. It starts, he said, directly from the skin, without any raised base or areola. It may be freely handled without pain, and on examination we find the growth in no way different from that of an ordinary horn growing upon one of the lower animals, being hard, laminated, and grayish in color. We may meet such horns growing upon any portion of the body, especially where the sebaceous glands are active; the face, neck, shoulder, hands, and even the glans penis in the male, may be the seat of the growth. (Dr. Duhring here showed several pictures of cutaneous horns, one of which, about three inches in length, grew from the back of the hand of an elderly person. Although firm to the touch, such small horns as this can be picked off without difficulty, leaving an excoriated or ulcerated base. The pathology of cornu cutaneum is simple: it springs from the deeper strata of the mucous layer of the epidermis, and consists in a hyperplastic growth of these cells.

Many cases of cutaneous horn have, from year to year, been reported in the journals, especially in former years. Of late they seem to be less frequently met with. As people become more enlightened they are disinclined to allow such growths to remain, and they are removed before they grow large. In this case the patient shall be directed to poultice the horn for a day or two, in order to soften and macerate it thoroughly, when it will probably come off spontaneously. But if the base be not destroyed, it will grow again, and we shall therefore direct that it—the base—be cauterized with one of the stronger caustics, say with caustic potassa. This will effectually prevent its recurrence.

In connection with this case, Dr. Duhring recalled a similar one, which had applied at the clinic about a year previously. This occurred in an Irish laborer, some fifty-six years of age. He had first noticed it about four months before, when the lesion showed itself in the form of a pin-head-sized papule, on the left side of the face, just in front of the ear. This grew slowly at first, afterward more rapidly. At the end of two months it began to harden, the surface grew horny, and when the patient came under observation he showed a well marked horn, flattened like an elongated, thickened and pointed claw or toe nail, more than half an inch in length and one-third of an inch in breadth at its attachment. It was quite movable upon its base, which was a raised fleshy tumor, the size of a small filbert, and presenting the appearance of a sebaceous tumor. The patient was seen again two months later, when the horn was found to have nearly doubled in length, preserving the same general shape, and lying flat against the skin, though only attached by its rather narrow crescentic base. At this time the horn was quite loose, and could easily have been picked off with the fingers.

**Verrucous Growth of the Scalp.**

A boy, about twelve years of age, was brought before the class showing a flattened, elongated warty growth on the right parietal region, about two inches in length by half an inch in breadth, and rising a quarter of an inch or more above the surrounding skin. The color of the growth was pinkish, while the neighboring integument was quite red, smooth, infiltrated, and showed a number of small pin-head-sized, pearly nodules or milia, filled with cheesy matter. There were no hairs proceeding from the growth itself, and the scalp in the immediate vicinity was quite bald. The growth was made up of a large number of small warty excresences, closely pressed together, and exuding, when pressed upon, a yellowish fluid from their interstices. There were no subjective symptoms. The growth had shown itself some years previously, as it was stated, a common wart upon the scalp, which grew with considerable rapidity and spread until it had reached the size presented. Prof. Duhring called attention to the absence of hair upon or in the immediate vicinity of the growth. This had been caused, in part, he thought, by mechanical means, and in part by inflammation and subsequent closure of the hair follicles. Had this growth occurred in an elderly person, it might give rise to some concern as being the probable starting point or seat of epithelioma. Even in a boy, if allowed to run on, such a verucca might, in time, give trouble, for epithelial degeneration might occur, with subsequently the formation of epithelioma. For this reason the growth should be removed, and the application to be recommended in this, as in the case of warts generally, is glacial acetic acid. This is to be applied by means of a small stick covered with cloth, or a mop, with which the acid may be rubbed in once or twice a day, until the warty growth becomes tender. Some time will probably be necessary to bring about its disappearance.

# Editorial Department.

## Periscope.

**The Treatment of Dyspepsia.**

On this subject Dr. A. Leared says, in the *British Medical Journal*—

In the treatment of all forms of dyspepsia attention to diet claims a prominent place. Articles known to be slow of digestion must be avoided, and a lessened amount of food must be taken only at proper times. But, as a rule, absolute strictness in diet is more necessary in dyspepsia from defective secretion than in that from impaired motion; for, as already said, in the latter affection digestion is sluggish rather than imperfect. One dietetic rule is, however, of the greatest importance in the present case. The principal meal should be taken early in the day, before the nervous system has been exhausted either by mental or by bodily exertion. In some instances the power of digestion seems to diminish in proportion as the day advances. A distinguished literary lady consulted me, who had, by incessant brain work, fallen into a state of great suffering from gastric oppression and flatulence after meals. At my suggestion she dined early instead of late in the day. This change was beneficial, but was not effectual in affording relief. I then advised that she should eat meat at breakfast only, and that no writing should be done before the meal. This plan succeeded perfectly.

From its well-known power in causing muscular contraction, strychnia suggests itself as the remedy for impaired gastric peristalsis. It affords the most powerful means we possess of restoring the gastric functions. I may, perhaps, take some credit for having helped to make known its value. So long ago as 1860, I wrote: "Speaking from extensive experience, I know no single medicine of more value. . . . . It acts by increasing the tone of the muscular coats of the stomach and intestines. When these coats are relaxed, gases are generated, mainly owing to retardation of the aliment in the cavities. No remedy has in my hands proved so permanently effective as strychnia against this inconvenience." (*Imperfect Digestion* 1st ed., p. 186.) In 1864 the late Dr. Brinton, following Chomel, condemned the use of strychnia in stomach diseases as unnecessary and dangerous. (*Diseases of the Stomach*, p. 334.) But, notwithstanding the condemnation of these authorities, strychnia has held its place in these affections, because, although too often given without discrimination, it proves beneficial in many instances. The secret of its successful administration lies in the recognition of the cases. It is suited for cases characterized by the symptoms of impaired motion; namely, uneasiness, but not actual pain, after food, and flatulence. It is not suited for cases of impaired secretion, characterized by pain after food and little or no flatulency.

Some precautions are, of course, necessary, and more so because the patients are seldom under daily observation. A dose of one-twentieth of a grain should rarely be exceeded. It should never be given in pills, on account of the difficulty of exact subdivision in that form. The susceptibility of the alkaloid to precipitation by alkalies and some other substances must be kept in view. If so precipitated, the whole of the drug would, of course, be contained in the last dose in the bottle. For the rest, the pharmaceutist must be responsible. But, after having prescribed strychnia some thousand times, I never knew any harm to arise from its use.

It might be supposed that electricity would prove useful for lesions of peristalis; but after many trials of faradization and a few of the direct

current, I am compelled to say that I do not regard it as a useful agent in this affection.

It is sometimes desirable to check flatulence by some agent which hinders fermentation. Formerly, I prescribed carbolic acid for this purpose; but its unpleasant taste is a great drawback. Of late, I have used thymol with, I think, better results; and the taste is far less objectionable.

Many cases are met with in which the stomach is unable to expel flatus in consequence of temporary paralysis from over-distension. Various drugs given to promote contraction of the organ —carminatives, as they are called—sometimes fail in their purpose. It is in such cases that charcoal proves useful. Charcoal possesses a remarkable power of absorbing gases; but this power, as I have elsewhere shown, is very much lessened by long keeping and by wetting. This led me to the plan of giving, in hermetically sealed gelatin capsules, charcoal prepared from vegetable ivory, which kind was proved by experiment to possess the best absorbing power. If, in cases of obstinate gastric distension, three or four such charcoal capsules be swallowed, a few cubic inches of carbonic acid gas will be speedily absorbed. Tension being now removed, the muscular coat of the stomach generally resumes its power, and flatus is freely expelled. In a few obstinate cases, however, chiefly when the stomach affection is secondary to diseases of the liver or kidneys, the muscular paralysis is so complete that, as happens in case of the over-distended *rumen* in cud-chewing animals, mechanical interference is the most effective mode of treatment. For this purpose, I have had made a small India-rubber tube (tube shown) two feet in length, having one extremity closed, and perforated like a drainage tube to the distance of four inches from the end. Such a tube can be safely and easily introduced into the stomach, and will prove effectual in relieving the distended organ.

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### The Neglect and the Value of Blistering.

Dr. H. S. Anderson, in his Harveian Discourse, published in the Edinburg *Medical Journal*, says—

A remedy which I fear is somewhat unduly neglected now-a-days is counter-irritation by means of blistering; and I think I have observed in some young practitioners an approach to something like terror when blistering is spoken of as a remedy that may frequently be used. Certainly, as regards children's diseases, there is more of this fear than there should be. It has frequently, for example, been my experience to see children, in consultation with a younger practitioner, when blistering in acute head affection had never been dreamed of. In mostly all acute inflammatory affections of the brain, tubercular or not, in children, I am strongly of opinion that after shaving the head the application of blistering fluid has a most rapid and satisfactory effect. Inflammatory attacks also, of the peritoneum and chest, in children, are often controlled by blistering, although the size of the vesicatory and the length of time applied must be carefully considered. And in the rheumatic affections of the joints, in adults, repeated blistering has often the happiest results. For many chronic conditions also, counter-irritation has always held a high place in my list of remedies. In chronic tubercular affections of both chest and abdomen, I think occasional and repeated blistering is frequently beneficial, and also in chronic and obscure head and other affections of the nervous system. For example, a blister over the roots of the nerves, in herpes zoster, often relieves the neuralgic pain so generally present, and often so difficult to get rid of. In diphtheritic paralysis, also, blistering the nape of the neck, and even down the spine, often expedites cure in a wonderful way. In the uterine or ovarian pain so often complained of in the left side, there is no better remedy sometimes than a succession of fly-blisters, and the tenderness of spinal irritation is very frequently relieved, if not got rid of, by the same means. In chronic effusions the use of blisters is still fully acknowledged, and does not therefore call for special mention.

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### Treatment of Cholera Infantum.

The following treatment is recommended by Dr. W. Frank Hines, of Maryland, in the *Southern Clinic*:—

Nothing is of more importance in this trouble than the diet. The practice of giving farinaceous substances—cracked wheat, tapioca, farina, etc.—is surely wrong and hurtful. The digestive organs of the child are very weak, and to put anything in them which they have not been in the habit of receiving is to over tax them; milk contains all the necessary ingredients for the support of the infant; but it does not contain any starch. If possible, the child should be fed on "mother's milk." If this is not practicable, cow's milk may be made to answer. Condensed milk I have seen act in a very satisfactory manner, when there is great prostration and weakness. Beef tea, with a little brandy in it, is very beneficial; say a teaspoonful of beef tea with half a teaspoonful of brandy, every three hours.

In regard to medication, I do not think a great deal is needed, except when there are frequent discharges. They must be stopped; if not, the child will die from weakness. In this connection the following treatment has been of great service:—

| | | | |
|---|---|---|---|
| ℞. | Bismuth. sub. nit., | ℥ ss | |
| | Spts. ammon. arom., | ℥ ij | |
| | Tinct. opii camph., | ℥ iss | |
| | Syrup simplic., | | |
| | Aquæ fon., | āā ℥ ss. | M. |

Sig.—Teaspoonful every 2½ hours to child 1½ to 2 years old, according to condition.

In some cases, where the diarrhœa is of a very persistent character, stronger measures will have to be resorted to; these are best determined by the circumstances of the particular case. The temperature should be kept down; there is nothing better for this purpose than quinia; but as there is generally head trouble in these cases, I do not think it advisable to use it. Cold cloths applied to the head, sponging with cold water, and ice water cloths to the abdomen, will lower and keep down temperature very satisfactorily, besides often relieving the head trouble.

**The Question of Tying the Cord.**

The *Annales de Gynécologie*, for February, 1879, contain a paper on this subject, by Dr. Alban Riebemont. He sums up his paper as follows:—

1. By ligating the cord late the infantile circulation receives on an average an addition of 92 grams of blood (Budin).
2. This blood, which is contained in the placental vessels, is most necessary for the full establishment of the infantile circulation.
3. The blood is drawn into the infantile circulation chiefly by the suction power exerted by the expansion of the chest walls (Budin), the pressure exerted by the uterus on the placenta (Schücking, Porak) having no considerable effect.
4. In cases of asphyxia, where the child has a bluish hue, the cord ought not immediately to be tied, nor should any hemorrhage be permitted from its fœtal extremity.
5. Ligating the cord late does not expose the child to the smallest immediate or ulterior danger.
6. The infant is thereby placed in the most advantageous circumstances possible for its development; it loses less weight, and regains what it has lost both sooner and quicker than if the ligature be made immediately.
7. The expulsion of the placenta is thereby rendered easier, and there is less resistance offered to its escaping through the cervix (Budin, Schücking).
8. He agrees with Hofmeier, Zweifel, Schücking and Budin, that the cord should not be tied till the pulsation in it has entirely ceased.

## Reviews and Book Notices.

### NOTES ON CURRENT MEDICAL LITERATURE.

——The proceedings of the American Medical College Association, at Atlanta, in May, have been published in pamphlet form, and copies may be had of the Secretary, Dr. Leartus Connor, Detroit, Mich. (Paper, pp. 14.)

——In pursuance of his fruitful studies on nervous diseases, Dr. George M. Beard, of New York, has recently had reprinted two of his articles, one on "Other Symptoms of Nervous Exhaustion," the other on 125 cases of Writer's Cramp and Allied Affections. They are well worth careful perusal.

——The seventh "Toner Lecture" was delivered by Dr. Edward O. Shakspeare, of this city, on the subject, "The Nature of Reparatory Inflammation in Arteries after Ligature, Acupressure and Torsion." It is a thorough study of the literature of the subject, illustrated by a number of original observations, and must prove of interest to all pathologists and surgeons. (Washington Smithsonian Institution. Price 25 cents.)

——Of gynecological reprints, we acknowledge one on the "Pendulum Leverage of the Obstetric Forceps," by Dr. A. H. Smith; on the "Hand as a Curette in Post-partum Hemorrhage," by Dr. H. P. C. Wilson; and a paper on the "Causal Lesions of Puerperal Convulsions," by Dr. James Tyson." The last mentioned goes to show that some form of Bright's disease is usually the exciting cause of convulsions. It is a reprint from the *Transactions* of the Pathological Society of Philadelphia. (pp. 56, 8vo.)

——Dr. Edward S. Dunster, of the University of Michigan, delivered, at the last meeting of the American Medical Association, a very able argument against a proposed amendment of the code of ethics restricting the teaching of students of irregular or exclusive systems of medicine. Indeed, we heard it characterized by a person present as the very best effort made at the meeting. The full argument now appears as a pamphlet of twenty-eight pages, with some appropriate accessory matter. Dr. Dunster has the right side, and he marshals his arguments with great skill and force.

——The radical cure of hernia by tying together the walls of the ring with carbolized catgut ligatures was effected by Dr. H. O. Marcy, of Cambridge, Mass., as far back as 1871, and several cases are recorded in his paper before the last meeting of the American Medical Association. He writes—"No method of operation for radical cure of hernia appears more feasible, is probably attended with less danger, and at the same time affords a means of closing and strengthening the weakened ring, which is so desirable, and yet, with all the ingenious devices of surgery, is so difficult to attain."

——Last winter the New York Neurological Society appointed a Committee on Insane Asylum Abuses. The Committee presented a petition to the State Senate, setting forth the most flagrant abuses of the New York asylums. The Senate referred the petition to a committee of two, to take testimony. These two only took such testimony as suited them, and made a report "unfair, one-sided and grossly misrepresenting the facts," according to the opinion of the Neurological Society. This opinion seems borne out in a "Provisional Report" of the Society's Committee. The explanation offered is that one of the Senators, Mr. Goodwin, is from Utica, and is "strongly affiliated" with Dr. Gray, superintendent of the asylum there.

——Dr. J. R. Black, of Ohio, sends a note of warning, which he thinks needed, under the title, "The Drift into Solidism" (reprint from the New York *Medical Journal*). What he wants to impress on the mind of the profession is that "the transmutation or the immediate extrication of the vital energies takes rise as an immediate effect of the interaction of the blood and the tissues, quite as much in the living organism as in the inanimate machine, and not according to the method which seems to be practically accepted as true, that blood is only to build up muscle, nerve and gland tissue, from which special varieties of force are afterward evoked, through the process of waste or retrograde metamorphosis."

——The tenth thousand of Dr. John Ware's little book, entitled, "Hints to Young Men on the True Relation of the Sexes," has been printed by A. Williams & Co., Boston. In spite of those who maintain that self-abuse is attended with few or no dangers, we hold to the old doctrine that it is most injurious and in many ways; and hence we welcome the circulation of this able and pure essay, and hope for it a wide reading among young men. It was written thirty years ago, and the author is no more, but he has left a beneficent legacy of sound advice, just as much or more needed now than when he first addressed his warning words to a generation which has now reached middle life.

## BOOK NOTICES.

**Elements of Modern Chemistry. By Adolphe Wurtz,** Professor of Chemistry of the Faculty of Medicine of Paris, etc. Translated and edited by Wm. H. Greene, M.D. With 132 illustrations. Phila., J. B. Lippincott & Co., 1879. Cloth, 8vo, pp. 687.

The author of this treatise has long been known as one of the most able chemists and successful teachers in France, and has especial celebrity for his masterly expositions of chemical philosophy, and the more abstract departments of that science. The translator has rendered the fourth edition of M. Wurtz's work with the approbation of the author, who has himself added a preface to the American edition. The field covered includes organic and inorganic chemistry, a full discussion of the atomic theory and chemical nomenclature, the alkaloids, alcohols and petroleum derivatives, and, in fact, the whole domain of the science. The numerous illustrations are carefully made and accurately printed, most of them serving to show apparatus and methods of manipulation. Indeed, no other elementary chemistry has greater claims for popularity.

One feature we note is missing which ought to be present, and that is a table of contents. Every facility ought to be furnished a student of such a difficult branch, and this is one of them. In the next edition we hope to see it remedied.

**Diseases of the Intestines and Peritoneum. By** John Syer Bristowe, M.D., J. R. Wardell, M.D., J. W. Bigbie, M.D., L. O. Habershon, M.D., T. B. Curling, F.R.S., and W. H. Ransom, M.D. New York, Wm. Wood & Co.

This is one of the volumes of Wood's Standard Medical Authors. As the title indicates, it is made up of a number of essays by the various English writers mentioned, extracted from Reynold's "System of Medicine" (to which no credit is given) and other sources. The usual diseases of the stomach and bowels are included, together with the peritoneum and abdominal tumors. As these essays have been before the profession many years, they need no special mention at this time.

**Transactions of the Pathological Society of Phila.** Volume VIII. Edited by J. Henry C. Simes, M.D., Philadelphia, 1879. J. B. Lippincott & Co.

Many instructive reports will be found in this volume, of which we have the space to mention only a few. A remarkable case of excision of four inches of the upper part of the rectum, in consequence of intussusception, caused by a villous tumor, is reported by Dr. M. O'Hara. The patient recovered promptly without a bad symptom. A case of fatty heart, with "polypus" of the right auricle, reported by Dr. T. P. Henry, is interesting for the distinction drawn by the reporter between fatty heart from atheromatous degeneration and that from primary deposit; as well as for his discussion of cardiac polypus, a mysterious affection which all who have read Rousseau's *Confessions* will remember was a prominent malady in the pathology of the last century. A well reported instance of syphilitic disease of the pleura and lungs is given by Dr. W. N. Warder. Dr. Charles H. Burnett devotes a number of pages to a discussion of the growth of the fungus aspergillus in the human ear. Recurrent or metastatic carcinoma is discussed by Dr. R. A. Cleemann. A long and thorough exposition of the causal lesions of puerperal eclampsia, by Dr. James Tyson, closes the volume.

THE

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**A WEEKLY JOURNAL,**

**Issued every Saturday.**

D. G. BRINTON, M.D., EDITOR.

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## POLITICO-ECONOMICAL REFLECTIONS ON THE PROFESSION OF MEDICINE.

There is a strong under current of feeling in the public, that the services of a physician ought, by rights, to be gratuitous. If we analyze this sentiment, we can probably trace it to several sources. In the first place, it appears on the surface of things that the physician's services cost him nothing. He does not give any material *quid pro quo*. The druggist furnishes the medicines, the instrument maker the apparatus. Hence, not to pay the doctor's bill does not seem like robbing him.

Another reason is, that it seems affliction enough to be sick, to lose one's time and suffer pain, without paying for that undesirable privilege. It looks like adding insult to injury for a fellow being to require you to pay him out hard cash, because you have met with unmerited misfortune.

Still stronger, perhaps, is the influence of the benevolent emotions in leading people to look grudgingly at the bill of the physician. This may seem paradoxical, but it is not. There is in every well regulated mind an instinct which prompts us to succor and relieve our fellow beings in affliction, and to do this, like the good Samaritan, without money or reward; rather, like him, besides binding the wound, to hand over from our own pockets certain pence to the innkeeper, to pay the sufferer's hotel bill. That instead of this a class of men should be found who mulct the unfortunate still further, is no doubt unconsciously repugnant to the untutored benevolent emotions.

Hence it is that many persons think themselves entitled to the gratuitous attentions of medical men, when they would not dream of asking other classes of business men to serve them for nothing. The poor of a community or a parish, those who cannot pay, are in popular opinion entitled to ask the nearest physician to visit them, and if he declines to do so on the ground that he cannot get paid, he is exposed to severe condemnation by his neighbors. All sudden accidents and emergencies demand his care, without regard to the possibility of requital. Benevolent societies expect him to look after the sick poor at their charge for nothing, or at a very low rate. Clergymen and their families are usually surprised and somewhat indignant if they are asked to pay for attendance. The families of other physicians are not supposed to be the recipients of bills.

There is, in fact, something contradictory in the business of the physician when regarded from a politico-economical standpoint. Here is a class of men depending on the presence of sickness in the community for their living, and yet ostensibly doing their utmost to prevent sickness; who profit the more the longer their customer is ill, yet who profess to be ever aiming to shorten that illness; who are engaged in the most benevolent of avocations, and yet seemingly violate the first principle of charity by demanding filthy lucre as the price of loving kindness. No wonder that there is some confusion in the public mind in view of these contradictions of theory.

Dr. RICHARDSON, of London, lately prophesied that the time will come when there will be

neither lawyers nor physicians, the need of both these professions being done away with by the increase of popular intelligence. That happy time is a long way off yet, but we are gratified that so deep a thinker has announced it as a sure thing, and the world can easily afford to wait a good while yet if it is to enjoy at last such a millennial state.

## Notes and Comments.

### Therapeutical Notes.

ULCERATIONS IN INFANTS.

The following is highly recommended by M. Archambault, in all kinds of painful ulcerations, etc., in infants:—

℞. Mucilage of quince seeds, 15 grams
Extract of rhatany, 5 grams.

TREATMENT OF PSORIASIS.

To clean away the scalds and prepare the skin for tarry remedies, etc., in psoriasis, nothing, says Dr. Preissmann, of Vienna, equals this:—

℞. Salicylic acid, 6 grams
Rectified alcohol, 100 grams.

Rub moderately the affected part with this mixture, on some charpie.

SACCHARINE DIABETES.

The experiments of Dr. Fürbringer, in Berlin, seem to show that the two most active agents in reducing the excretion of sugar in this disease are salicylate of soda and carbolic acid.

NIGHT COUGH OF CHILDREN.

In this affection Dr. MacDonald says, in the Edinburg *Medical Journal*, he has derived great benefit from hydrocyanic acid, prescribed as in the following mixture:—

℞. Acidi hydrocyanici dil., ♏viij
Syrupi simplicis, f. ℥ ij
Aquæ destillatæ, f. ℥ ij. M.
Fiat mist.

Sig.—One teaspoonful every four hours.

### The Quinine Question.

Dr. D. J. Roberts, of Nashville, was the principal advocate, at Atlanta, of removing the duty on quinine. Shortly after the meeting the editor of this journal addressed him, asking for a synopsis of his remarks and some further light on the subject. No answer was received until after Congress had adjourned, when Dr. Roberts wrote that "it had been suggested to him by certain ones who were moving actively in the matter to use extreme caution" in his language; in other words, to avoid a free and fair discussion of the subject.

The result of this narrow and tricky policy, quite unworthy of a liberal profession, is the passage of an Act which, as we showed last week, plays directly into the hands of foreign dealers and domestic drug sharps, and will not cheapen quinine with any certainty at all.

We hope the next movement of the kind will be engineered by men who are not afraid of honest publicity, and are above the wiles of ward politicians.

### Virchow on the Germ Theory.

In his late work on "Infectious Diseases in the Army," Prof. Virchow does not anticipate much aid to diagnosis or treatment from microscopic investigations of *vibrios*, *monads*, *micrococci*, *bacteria*, etc., with reference to peculiar forms of disease. He emphasizes the fact, however, that Billroth's supposed mother plant of all these—*Coccobacteria septica*—is always present in the human body itself, notably in the intestinal canal of healthy persons; so that a primary importation, an infection, or a transference, seems hardly required; it is already at hand, and wants only favorable conditions for propagating and further growing.

### On the Diagnosis of Large Ovarian Tumors.

Under this title Schultze contributes a short paper to No. 6 *Centralblatt für Gynäkologie*, March, 1879. The improvement in diagnosis which the author insists upon is to practice the combined exploration, with one or two fingers in the rectum and the other hand upon the lower part of the abdomen, more completely than has usually been practiced hitherto. For this purpose he recommends to chloroform the patient, and to have the tumor well pushed and held up by an assistant. This being done, its connection with the uterus and pelvis can, he says, be made out very accurately.

### Western North Carolina for Consumptives.

A recent letter from a subscriber who has been spending this year in Asheville, North Carolina, adds further testimony to the value of the elevated plateau in that vicinity as a resort for phthisical patients. The district is high, well drained, dry, cool in summer, not bitterly cold in winter. The scenery is interesting and the inhabitants friendly to visitors. Dr. Gleitsmann's excellent sanatorium is near Asheville, the reports from which prove the conditions of that locality to be peculiarly favorable for consumptives.

# CORRESPONDENCE.

## FOREIGN.

### Letter from London.

ED. MED. AND SURG. REPORTER:—

Trusting that a concise account of the workings of some of the most noted hospitals and medical schools of London will be of service and interest to some of your readers, I resume the subject in this letter by giving an outline of the Charing Cross College.

Among the teachers of the school is the well-known L. S. Forbes Winslow. In the college catalogue, one of the headings under the "Medical Officers" is entitled "*Chloroformists.*" This is the case, indeed, with all the English catalogues, showing that the operators, like our own much respected Prof. Gross, will have one certain one only to administer the anæsthetic.

Certain days of the week are set aside in most of the London hospitals as operation days, and these days are printed in the various medical journals, and usually a written notice is posted up in a conspicuous spot in the hospital and college, of the hour, the character of the operation, and the operator for the following or present day.

It was a matter of great surprise to find how many, even of the noted physicians, know but little of American physicians.

Making frequent inquiries, I find but very few homœopathic physicians, as compared with the United States. It is said the system flourishes best in the United States, then England and Scotland coming next, and on the Continent—its birthplace—it is decidedly scattering. Indeed, the late Madame Hahnemann said, when consulted in regard to the publication of some of her husband's manuscripts, that they must go to America; that "to America homœopathy must look for its best support and its proper promulgation."

Prof. Lister is taking well in the United Kingdom, especially in London. There is more opposition to his system in Edinburgh than elsewhere. His chief opponent in London is Dr. Hutchinson, of Cavendish Square, who is a believer in the alcoholic plan of antiseptic treatment.

There was a report going the rounds in London that Lister's practice was very small, but I am informed by a very prominent gentleman of the profession, who is personally acquainted with Mr. Lister, that this is not the case. From what he knows by personal observation, and from what the great surgeon tells him, he knows that his practice is both large and lucrative. I called at his house, but unfortunately found him away from the city for several days. He is very particular, as many other surgeons of London, about being called *Mr.* Lister, not *Dr.* Lister. The surgeon looks down upon the doctor as an inferior species of the medical class. What strange things time will work! Medical history tells us that once the surgeon belonged to a different family entirely—to the *barber tribe;* the doctors, the physicians, the great healers of human ills, would not deign to handle the knife and the various instruments of the operator. The tables are almost completely turned. The surgeon has now the maximum of medical honor, and is rather inclined to snub the plodding physician. He no longer is the barber, but the brilliant operator of the great hospital amphitheatre. Has not the brilliancy of an operation more than once dazzled a surgeon's judgment, and made him hold up exultingly a mangled foot removed, that kind nature might have restored to usefulness again?

The only sign on Lister's house is a simple brass plate, quite small, fastened to the door, having on it—"Mr. Lister." This one may read without paying a sixpence. I became so used to paying a sixpence, in London, for everything I did, that I felt almost guilty, after leaving the house, for stopping a few minutes to look at the home of this noted surgeon without dropping a coin into the hat of a near-by beggar.

Dr. Dobell gave me a very hearty reception, and made me feel at home at once. Dr. Dobell is about in midlife, looking much more like an American than an Englishman, his form being far less bulky than the ordinary run of English people.

Dr. Dobell is connected with the Consumption Hospital of London, and his chief hospital work is in the direction of heart and lung diseases. His practice is not confined to these diseases, but he is having a very good general consulting practice. He says he writes on coughs, etc., because of his hospital work furnishing so much material, and because it is very uncommon in London to report "a case in private practice," as so often is seen in American journals.

The doctor is undoubtedly right in regard to himself, but I think the British journals quite often report cases from some one's private practice.

Each arrival in a physician's office is announced by the porter dropping a card into a box, through the door of the consulting room. Hearing one drop in, the doctor slowly goes over, while conversing with you, removes the card, glances at the name and places it with others on the table. This occurred several times while I sat with Dr. Dobell. A very convenient plan, saving the inconvenience of opening the door to answer the party's knock just at a given time, when the examination of the patient may be interfered with.

C. C. V.

## DOMESTIC.

### Irritable Ulcer of the Rectum Treated by Forcible Dilatation.

ED. MED. AND SURG. REPORTER:—

I read with interest the letter in the REPORTER, volume XL, page 526, on "Irritable Ulcer of the Rectum and its Treatment by Forcible Dilatation." I have now treated six cases the past four years by this method, and with uniform success. I learned this mode of treatment from my confrere, Dr. F. A. Howe, who has for many years treated irritable fissure by Recamier's method of dilatation (Recamier, of Paris, being, if I mistake not,

the originator of this treatment). My first case resembled very much that recorded by Dr. Rush in your columns. The patient was an old lady, of seventy, who had been suffering for three months from a distressing pain in the lower bowel, occurring on defecation, and lasting for several hours. I did not dilly dally with internal remedies and topical applications, but proceeded at once to forcible dilatation, chloroform having been administered. And here I would say that I believe anæsthetics necessary to the success of the operation, for so sensitive is the anal region in this complaint that the introduction of the finger or speculum without ether is intolerable. For this reason, too, the fissure is very seldom seen by the examining surgeon, but its presence is inferred from the pathognomonic symptom—burning pain attending defecation, and lasting from one to six hours. It is, as Van Buren describes it, a dull, gnawing, excessively distressing sensation, located just within the orifice of the anus, unfitting the sufferer for any occupation, and making him completely miserable.

To return to the brief account of my first case—the operation was attended with immediate and permanent relief.

In another case which I was shortly after called in to treat, that of a young man of 27, merchant, for more than a year doomed to almost constant suffering, and seriously shattered in health, the manœuvre of forcible dilatation wrought immediate cure. I obtained considerable eclat from this case. In such cases a little skill and knowledge tells, far more than the ordinary routine practice of medicine. Here you obtain instantaneous good results, which are not so sure to follow the anxious attentions which you bestow on your fever patients.

Your correspondent has well described the mode of dilatation—the thumbs are introduced back to back, about the whole length, and then you pull them apart with about all your strength, till you hear something *snap*, or till the palmar aspect of the thumbs touches the ischial tuberosities.

The young man of whom I have just spoken had spent "hundreds of dollars," as he expressed it, "in doctoring."

My third patient was a strong, healthy man, who had for some time been disabled for work. I treated him in my office, by dilatation, without ether or chloroform. The operation was accomplished under great difficulties, and was successful, but there was an unpleasant accompaniment which made me resolve never again to perform dilatation without the needful anæsthetic.

My next patient was a consumptive, whose closing scene was rendered more comfortable by having got rid of a distressing infirmity.

The operation of Boyer—division of the mucous membrane through the centre of the ulcer, is recommended by Brodie, and is the favorite treatment of Allingham. (See the Lectures of the latter on "Diseases of the Rectum.") I have never resorted to this method. It is undoubtedly equally efficacious.

I have had two cases since the last to which allusion was made; immediate deliverance from an agony of months was obtained by the manœuvre of forcible dilatation. A good deal of soreness, smarting and swelling generally follows the operation; this needs an opiate, a cold water pad, and rest in bed for a few days.

The pathology of the affection, and the *modus operandi* of the treatment are well described in the little work of Van Buren on "Diseases of the Rectum," published by D. Appleton & Co., of New York. Dilatation paralyzes the sphincter, and gives the ulcer or fissure rest and time to heal.

In "Napheys' Surgical Therapeutics" a long list of local remedies is given, which may be tried first, before dilatation; it seems to me that the operation of forcible dilatation is so simple, so easy (with ether), so safe, and so certain, that it should supersede all other modes of treatment.

*Newburyport, Mass.* E. P. HURD, M.D.

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### Veratrum Viride Poisoning.

ED. MED. AND SURG. REPORTER:—

The fatal case of poisoning from tincture of veratrum viride, to which I drew your attention in the REPORTER of the 26th of April last, was never, to my knowledge, reported anywhere, but at the solicitation of many I will endeavor to give an account of the case as it occurs to me at this time, and my friend, Dr. De Forest Willard, whom I called to assist me on this occasion, has kindly volunteered to do likewise.

The victim was an internal revenue collector, A. A., about thirty years of age, residing at D., in the vicinity of Philadelphia, Pa. I first saw him in a hotel, standing in the middle of a room, endeavoring to divest himself of his clothing preparatory to going to bed. He had the appearance of one suffering from a severe chill, but upon examination I found the skin feverish, with copious perspiration, the heart beating violently, with a corresponding weak, rapid and feeble pulse, about 120 or 130 per minute; the pupils of the eye were dilated, but responded to light; there were frequent efforts at deglutition previous to vomiting, vertigo, numbness and incoherent speech. He said that he had dyspepsia and palpitation of the heart occasionally, but he could not account for the cause of his sickness unless it was owing to four or five glasses of liquor that he had taken during the day. In answer to my inquiries as to where he had procured the liquor, it finally occurred to him that he had entered a drug store at D., which he was in the habit of frequenting, and helped himself to a *drink* of the common tincture of veratrum viride in mistake for whisky. At this startling recollection he immediately vomited profusely and was greatly prostrated. The odor of the ejected matter was sufficient to verify his statement, for the atmosphere of the apartment was strongly impregnated with the peculiar smell of the drug, also showing the immense quantity that he had taken. He also stated that after leaving the drug store he rode to the city in a wagon, a distance of five miles, entered a restaurant and partook of a hearty supper. Soon after he felt sick (vertigo), and applied for a room in a hotel, which was furnished him, and where I first saw him about two hours after he had taken the fatal potion.

The symptoms were somewhat conflicting, hav-

ing a powerful arterial sedative and a stimulant contending against each other for the mastery. While the stimulant accelerated the action of the heart the sedative diminished its force, so much so that the pulse at the wrist became almost imperceptible.

The treatment consisted in the administration of emetics, which acted promptly, until the stomach was entirely emptied of its contents, then the use of laudanum and stimulants internally and morphia sulphate hypodermically; applied warmth to the extremities, counter irritants and friction to the surface of the body; but the patient continued to lie in a semi-conscious state, showing but little response to the remedies employed. The symptoms continued to increase until death closed the scene, about 11 o'clock the same night. We resorted to artificial respiration, and continued it for some time, but all to no purpose.

It afterward appeared that Mr. A. was busily engaged during the day of the 5th November, 1872, attending to election returns (presidential election), and was greatly excited during the entire day—drinking occasionally, as he himself stated, but not to excess. It was in this state of excitement that he entered the drug store and made the mistake. We did not learn whether or not he had taken veratrum viride for palpitation of the heart at any previous time, but the inference is that he probably was in the habit of resorting to this as a remedial agent for that affection, and in the excitement had committed the fatal error. Mr. A. was a man of intelligence, and seemed to feel his case a hopeless one, as was evinced by the sudden change in his mental condition at the instant that the poisoning occurred to him, when he almost sank to the floor, after which he lay as if resigned to his fate, realizing the toxic effect of the tincture.

I am of the opinion that the drug would have acted as an emetic promptly, had it not been for the admixture of the whisky, which had previously exerted its influence on the membranes of the stomach, thereby enabling the tincture to be tolerated until an excessive quantity was absorbed into the circulation, which otherwise would have been rejected and death probably averted.

R. M. KIRK, M.D.

*New Brunswick, N. J., June 27th*, 1879.

NOTE BY DE F. WILLARD, M.D.

I saw the case about 10.30 P.M. The retching and vomiting had been excessive, but there was no purging. The depression was extreme, extremities cold, skin cool and clammy, and while the heart's action was tumultuous, yet the circulation was exceedingly feeble; so feeble, in fact, that the pulse at the wrist was but a faint flicker. With the ear placed at the heart, I could discover 120 contractions; the feeble wrist pulse showed not more than fifty beats. The pupils were dilated, but responded to light. Consciousness was almost obliterated, but after violent vomiting he spoke intelligibly; soon afterward, however, he sank into a state of scarcely perceptible existence, and only occasionally moaned when moved. There was no paralysis, but a decided diminution in power of muscles; so much so as to render him incapable of even sitting erect. Having been freely drinking all day, it was difficult to separate the one set of symptoms from those of the other poison; a fact which may account for the apparent incongruities of phenomena in the case.

The odor of the ejecta was very characteristic, the smell of veratrum being plainly distinguishable from that of the mingled liquor and food.

The breathing soon failing, artificial respiration was commenced, and was continued for an hour and a half, long after the heart's action had entirely ceased, for the reason that whenever the chest was fully expanded a slight inspiratory action was developed, which awakened a faint hope that life might be sustained until the virulence of the poison had expended itself, and the secretory functions succeed in carrying it away. Without this artificial help, however, there were no evidences of life after 11 P.M., and at 12.30 A.M. it was abandoned.

No post-mortem was held, but the excessive, constant vomiting, the feeble circulation, the characteristic odor, the absence of purging, the great depression, the loss of muscular power, and the manner of death, justify the belief that death was due to veratrum, and not to alcohol.

The late appearance of the symptoms shows the non-absorbent condition of a stomach when distended by a heavy meal and a large quantity of liquor. It is strange, however, that he could drive five miles in an open wagon, and then walk about the streets for nearly two hours, with a fatal dose of poison in his stomach.

1626 *Chestnut St., Phila.*

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## Inverted Toe Nail.

ED. MED. AND SURG. REPORTER:—

Having read with interest an article by Dr Hickman, on the above subject, in the REPORTER for June 14th, I thought I might contribute a mite to our knowledge of the means of curing this painful affection, that would possibly be new to some of your readers. I do not claim for it that it is superior to Dr. H.'s treatment, inasmuch as I have never seen his method applied. But I have never seen the operation of which I am about to speak fail, when thoroughly performed. The majority of the cases that form the basis of these remarks occurred in the practice of my preceptor, Dr. Samuel Holman, of North Parma, N. Y. He does not know with whom the operation originated; indeed, he has forgotten how or where he acquired his knowledge of it. I have never read any description of it, nor heard any except from him, hence I infer that it is not commonly done.

As to the value of thinning the middle of the nail, I can testify, both as patient and practitioner, having been in the habit of treating my own toe in that way, as well as of recommending it to those of my patients who are similarly afflicted. This, however, I regard as of more value in the early stages of the trouble than after the ulcerative process has begun. After ulceration has commenced, the plan taught me by Dr. Holman, and which I have successfully adopted, is simply the following: Introduce the point of a scalpel alongside and close to the root of the nail, transfix the soft parts and cut for-

ward, keeping the knife parallel with the side of the nail, until it passes out at the end of the toe. Now seize the end of the flap thus formed with a small pair of forceps; reverse the edge of the scalpel, introduce it in the wound at point of starting, and cut obliquely backward and inward (or outward, as the case may be), until the flap is removed, thus taking away the soft parts on the affected side. Dress the wound in the ordinary manner, instruct your patient to keep his nail properly cut, and not to wear a narrow-toed boot, and in a short time the cure will be effected. As the cicatrix forms it tends to retract the tissues from under the edge of the nail, thus overcoming in a measure the tendency to a recurrence of the trouble. An anæsthetic may or may not be used during the operation, as the courage of the patient and judgment of the surgeon may direct.

I have seen a patient faint while a pledget of lint or cotton was being inserted under the edge of the nail. The orthodox plan of removing the whole nail richly deserves the term "barbarous," as applied to it by Prof. Gross. The operation which I here recommend is not a severe one, and has the merit of being all done at once. If necessary to operate on both sides of the same toe, it can all be done at one sitting. I have heard patients say, on the third day after this operation, that they could get about more comfortably than for months previously. I do not wish to disparage the practice or teachings of my seniors, but simply ask for this little operation their consideration. W. D. O'Brien, M.D.

*Kendall, N. Y.*, June 30th, 1879.

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### Found—A Critic!

Ed. Med. and Surg. Reporter:—

In the editorial columns of a recent number of a medical journal there is a request made for a critic, who shall see that all articles are rigidly reviewed, in order that our medical periodicals may contain less "bosh." In the editor's words I find it stated that when once some new treatment is started, the paste pot and scissors transfer the cream of the article from journal to journal, and it is translated into two or three foreign languages, and, perhaps, back again (as he has known) to the original. It is not strange that he *should* know such instances to occur, since this identical thing has occurred in the very number of his journal in which his editorial is printed. Aye, more than that, it occurs on the page opposite his editorial, and in the column and lines corresponding to his own words quoted above. It is a translation coming through the digestive track of two well-known German journals, on "Belladonna in Collapse." This translation, for which he doubtless paid, is an abstract of a long article on the subject, which was originally published in his own pages on February 2d, 1878. Alas! how soon parents forget their offspring when they have once thrust them into the world. I do not mention this fact, sir, to disparage the journal in question, which I look for with wistful eye every time it is due, but merely to answer the advertisement, which says, "Wanted—A Critic."

A Reader of Journals.

## News and Miscellany.

### The American Academy of Medicine

Will hold its next annual meeting in New York city, Sept. 16th. The objects of the Academy are—

1. To bring those who are alumni of collegiate, scientific, and medical schools into closer relations with each other.

2. To encourage young men to pursue regular courses of study in classical or scientific institutions before entering upon the study of medicine.

3. To extend the bounds of medical science, to elevate the profession, to relieve human suffering, and to prevent disease.

The Fellows of the Academy must be Alumni of respectable collegiate institutions, who have received therefrom—

1. The degree of Bachelor of Arts, after a systematic course of study, preparatory and collegiate.

2. The degree of Master of Arts in accordance with the usage of these institutions.

3. The degree of Doctor of Medicine, after a regular course of study, not less than three years, under the direction and instruction of preceptors and professors. They must have also had an experience of three years in the practice of medicine.

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### Cremation.

The Municipal Council of Udine, in Northern Italy, has lately published a decree, in which it declares that, after having duly weighed and considered the advantages and drawbacks of cremation *versus* interment, it has come to the conclusion that the former is in every respect preferable, for the following reasons: 1. In a hygienic point of view, it is undoubtedly the best way of disposing of dead bodies. 2. It is a mark of progress, because, by making cremation optional, the individual is at liberty to choose between the two modes of burial. 3. Considered from a scientific, social, religious and sentimental point of view, no valid reasons can be brought forward against it, while many very good reasons might be quoted for it. 4. The expenses would not be heavier than those of an ordinary burial. Cremation has been long introduced, and is carried out, at Milan, as at Gotha. It is now also officially authorized in Paris. We shall be glad to welcome it in Philadelphia.

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### The Yellow Fever Again.

With great regret we make the announcement that the yellow fever, in epidemic form, has broken out again in the city of Memphis. The first cases were reported on the 10th inst., during the great heats of July, and as fully three months from that date must elapse before the appearance of frost, we cannot but look forward with gloomy forebodings to this summer in the lower Mississippi valley. The powers conferred upon the National Board of Health may succeed in stemming the progress of the epidemic, and no doubt will material lessen its ravages. But when it is

remembered that this is more than a month earlier than the outbreak of the disease in Memphis last year, the prospect, at best, is a dark one.

It is probable that the Board of Health of Memphis has done the most it could do in preparing the city to resist the fever; but with a bankrupt municipality, and the accumulations of forty years of neglect and disregard of sanitary precautions, with streets without sewers and paved with rotting wooden blocks, the task was herculean. At last accounts all were leaving who could, and this is much the safest precaution to take.

We also notice that an official telegram from Lisbon, dated June 24th, announces the appearance of two cases of yellow fever at Pedrouso, a village situated about three miles from Lisbon.

### The Hahnemann Medical College

Of Chicago was charged before the Illinois State Board of Health with issuing diplomas to persons who had not attended two full courses of lectures at the college. These charges were, moreover, amply proved, and finally acknowledged. Yet, on the ground of the "doctrine of equivalents," and of "testimonials," as many of which were produced as is necessary to start a quack medicine, the Board concluded by affirming the good standing of the College. This is one of the weakest acts we have yet heard of about that Board.

### Personal.

—The degree of M.D., *honoris causâ*, was publicly conferred on Prof. Lister, by the University of Dublin, on June 26th.

—Doctors Schneider and Smith, of the Cleveland medical faculty, have been fined $500 each and costs, and the Janitor $250 and costs, for concealing the body of the late Edwin French.

—Dr. H. R. Storer, the well-known gynæcologist, who formerly resided in Boston, but who now lives at Newport, Rhode Island, was, on the 8th of June, baptized into the Roman Catholic Church.

—Dr. Neubauer, the well-known joint author with Professor Vogel of "An Introduction to the Qualitative and Quantitative Analysis of the Urine," a work translated in 1863 for the New Sydenham Society, and recently republished in this country, died at Wiesbaden on June 2.

### Items.

—The Paris initiative committee for the consideration of a proposal to enforce a diminution of the hours of labor in factories from twelve to ten hours, has decided in favor of the latter.

—At a meeting of the Butler Co., Iowa, Medical society, the following officers were elected for the coming year: President, Dr. Spooner; Vice President, Turner; Secretary, Boucher; Treasurer, Isherwood; Censors, Dudley, Young and Powers.

—Two first-class British ocean steamships are now plying between Baltimore and Halifax, for lack of anything better to do, to give invalids and tourists a cheap and brief ocean trip, with all the belongings of a regular passage over the Atlantic.

—The members of the medical profession in Berlin have established, in commemoration of the Emperor's golden wedding, a fund for the benefit of distressed members of the profession in that city, and their widows and orphans. The capital sum contributed was about $3000.

### MARRIAGES.

BIDDLE—McKENNAN.—On Thursday, June 19th, at Trinity Church, Washington, Washington county, Pa., by the Rev. Dr. Earp, Alexander Williams Biddle, M.D., of Philadelphia, and Annie, daughter of the Hon. William McKennan, Judge of the United States Circuit Court of Pennsylvania.

GREEN—BURK.—June 11th, 1879, by Friends' ceremony, G. D. Green, M.D., of Media, and Annie Warner Burk, of Philadelphia.

HOFF—ATLEE.—On the 17th ult., in St. Mark's Church, this city, by the Rev. E. A. Hoffman, D.D., George A. Hoff, of Waterloo, Iowa, and Margaret H., youngest daughter of the late Washington L. Atlee, M.D.

HOWELL—KNOX.—June 5th, 1879, in Freeport, Harrison County, O., by Rev. M. C. Grimes, assisted by Rev. J. K. Grimes, Dr. J. G. Howell and Miss Mary J. Knox, both of Freeport, O.

LACY—KLINE.—On the 29th of May, 1879, in Grace P. E. Church, by the Rev. Dr. Suddards, assisted by the Rev. Mr. Ashton, Fred. C. Lacy, of Allegheny City, Pa., and Lillian A., daughter of Dr. R. H. Kline, of Philadelphia.

LENKER—STODDART.—At Wilkesbarre, Pa., June 5th, by Rev. F. B. Hodge, Christain Lenker, M.D., of Columbia County, Pa., and Mary, daughter of the late John Stoddart, Esq., of Wilkesbarre.

LEVY—PALMER.—At Grace Church, Orange, N. J., on Tuesday, the 10th inst., by the Rev. James S. Bush, of West Brighton, Staten Island, assisted by the Rev. Dr. Schuyler, Rector of the Parish, Dr. Frederick Arthur Levy and Margaret I. Reynolds, daughter of the late Hunloke W. Palmer.

MURDOCK—DILLINGHAM.—In this city, on the 26th ult., by the Rev. Dr. George Dana Boardman assisted by Rev. Dr. J. N. Murdock, Annie, daughter of Dr. S. Dillingham, and Joseph B. Murdock, U. S. Navy.

NEFF—LUDLOW.—On the 12th inst., by Rev. J. A. Henry, D.D., Dr. Joseph S. Neff and Miss Hattie L. Ludlow, both of Philadelphia.

PURSELL—BARTOLETTE.—In Milford, N. J., June 4th, by Rev. Isaac M. Patterson, Howard Pursell, M.D., of Bristol, Pa., and Nellie C., daughter of the late Charles Bartolette, M.D., of Milford.

RANKIN—SERVIS.—June 5th, by Rev. J. S. Beekman, R. M. Rankin, M.D., of Hopewell, N. J., and Miss Laura S. Servis, of Reaville, Hunterdon Co., N. J.

RUSHMORE—HAFF.—On Wednesday, June 4th, 1879, at the residence of the bride's parents, Hempstead, Long Island, by the Rev. Charles E. Miller, Edwin C. Rushmore, M.D., and Mary Ella, daughter of Benjamin A. Haff, Esq.

SABINE—BARDWELL.—In Newport, Vt., June 11th, by Rev. E. E. P. Abbott, Dr. Silas A. Sabine and Clara A. Bardwell, both of Claremont, Vt.

VANUXEM—PFEIFFER.—At Camden, N. J., in the Second Presbyterian Church, June 19th, by Rev. L. C. Baker, Henry Vanuxem and Marie, daughter of G. S. F. Pfeiffer, M.D., all of Camden.

WOODS—HUNTZINGER.—In this city, on the 19th ultimo, by the Rev. A. W. Williams, Dr. Matthew Woods and Emily L. Huntzinger, both of this city.

WOOLSEY—CUNNINGHAM.—On the evening of April 13th, by Rev. L. B. Hughes, M.D., at the parsonage of Twenty-eighth Street M. E. Church, No. 1218 N. Twenty-seventh Street, William F. Woolsey, M.D., and Miss Mary Cunningham, both of Philadelphia.